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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,057	01/14/2004	Pawan Chaturvedi	2427	4828
28005	7590	06/23/2006	EXAMINER	
SPRINT			PEREZ, JULIO R	
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OVERLAND PARK, KS 66251-2100			2617	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,057	CHATURVEDI ET AL.	
	Examiner	Art Unit	
	Julio R. Perez	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2617

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Claim Objections

2. Claim 1 is objected to because of the following informalities: on lines 6-7, -- given -- should be inserted between "the" and "mobile"; on line 7, -- given -- should be inserted between "the" and "mobile station"; on line 8, -- given -- should be inserted between "the" and "mobile station"; on line 9, -- given -- should be inserted between "the" and "mobile station"; on line 10, -- given -- should be inserted between "the" and "mobile station"; and on line 12, -- given -- should be inserted between "the" and "mobile station". Appropriate correction is required.

3. Claim 2 is objected to because of the following informalities: on line 2, -- given -- should be inserted between "the" and "mobile station"; and on line 5, -- given -- should be inserted between "the" and "mobile station". Appropriate correction is required.

4. Claim 5 is objected to because of the following informalities: on line 2, -- given -- should be inserted between "the" and "mobile station". Appropriate correction is required.

5. Claim 6 is objected to because of the following informalities: on line 2, -- given -- should be inserted between "the" and "mobile station"; and on line 3, -- given -- should be inserted between "the" and "mobile station". Appropriate correction is required.

6. Claim 8 is objected to because of the following informalities: on line 1, -- of claim 1, -- should be inserted after "network". Appropriate correction is required.

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7. Claim 9 is objected to because of the following informalities: on line 1, -- given -- should be inserted between "the" and "mobile station. Appropriate correction is required.

8. Claim 11 is objected to because of the following informalities: on line 1, "a mobile station" should be "the mobile station". Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 7 recites the limitation "the first slot cycle index" and "the second slot cycle" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims rejected under 35 U.S.C. 102(e) as being anticipated by Cramby et al. (hereinafter Cramby), US Patent Number 7,020,477.

Regarding claim 1, Cramby discloses a radio access network comprising: at least one antenna structure for sending and receiving signals over at least one radio frequency air interface in communication with mobile stations operating in a coverage area of a base station (Figures 1-2; column 2, lines 64-67-column 3, lines 1-13); paging logic for sending page messages to mobile stations via the antenna structure, wherein, for a given mobile station, the paging logic is arranged to send a page message to the given mobile station on a paging channel slot that the mobile station is set to monitor (column 3, lines 30-42; column 4, lines 4-67- column 5, lines 6-14; column 7, lines 7-67)), to wait up to a time interval for a response from the given mobile station and, absent receipt of a response from the given mobile station by expiration of the time interval, to re-page the given mobile station on a next time paging channel slot that the mobile station is set to monitor; and interval-selecting logic for selecting the time interval based on a paging slot cycle index of the given mobile station (column 3, lines 14-42).

Regarding claim 2, Cramby discloses, wherein: the interval-selection logic is arranged to select a first time interval if the mobile station is operating at a first slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and the interval-selection logic is arranged to select a second time interval shorter than the first time interval if the mobile station is operating at a second slot cycle index smaller than the first slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 3, Cramby discloses, further comprising a base station controller, wherein the base station controller applies the paging logic and the interval-

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selection logic (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 4, Cramby discloses, further comprising a mobile switching center, wherein the mobile switching center applies the paging logic and the interval-selection logic (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 5, Cramby discloses, wherein the interval-selection logic operates dynamically to select the time interval when the radio access network is paging the mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 6, Cramby discloses, wherein the interval-selection logic operates to select the time interval for the mobile station after a determination is made of what slot cycle index will be used for paging the mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 7, Cramby discloses, wherein: the first slot cycle index is 2 and the second slot cycle is 0 (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 8, Cramby discloses, further comprising: a processor (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); data storage (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and machine language instructions stored in the data storage and executable by the processor, the machine language instructions defining the paging logic and the interval-

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selection logic (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 9, Cramby discloses, wherein the mobile station is a cellular telephone (column 4, lines 4-6).

Regarding claim 10, Cramby discloses a method comprising: using a slot cycle index of a mobile station as a basis to select a failure-interval to use for re-paging the mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and using the selected failure-interval as a basis to determine when to re-page the mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 11, Cramby discloses, wherein using the slot cycle index of a mobile station as a basis to select a failure-interval to use for re-paging the mobile station comprises: if the slot cycle index is a first slot cycle index, selecting a first failure-interval (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and if the slot cycle index is a second slot cycle index smaller than the first slot cycle index, selecting a second failure-interval shorter than the first failure-interval (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 12, Cramby discloses, wherein the first slot cycle index is 2 and the second slot cycle index is 0 (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 13, Cramby discloses, wherein using the selected failure-interval as a basis to determine when to re-page the mobile station comprises: waiting

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for expiration of the failure-interval (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and upon expiration of the failure-interval, re-paging the mobile station at a next timeslot commensurate with the slot cycle index of the mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 14, Cramby discloses a method comprising: receiving a signal indicative of an incoming communication for a first mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); determining a first slot cycle index under which the first mobile station operates (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); paging the first mobile station on a paging channel slot commensurate with the first slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); waiting a first interval to receive a page response from the first mobile station, and making a first determination, upon expiration of the first interval, that a page failure has occurred (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); responsive to the first determination, re-paging the first mobile station on a next paging channel slot commensurate with the first slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); receiving a signal indicative of an incoming communication for a second mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); determining a second slot cycle index under which the second mobile station operates, wherein the second slot cycle is different than the first slot cycle index (column 3, lines 14-42 -

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column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); paging the second mobile station on a paging channel slot commensurate with the second slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); waiting a second interval to receive a page response from the second mobile station, and making a second determination, upon expiration of the second interval, that a page failure has occurred, wherein the second interval is different than the first interval (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and responsive to the second determination, re-paging the second mobile station on a next paging channel slot commensurate with the second slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 15, Cramby discloses, further comprising: selecting the first interval based on the first slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9); and selecting the second interval based on the second slot cycle index (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 16, Cramby discloses, further comprising: selecting the first interval when paging the first mobile station; and selecting the second interval when paging the second mobile station (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Regarding claim 17, Cramby discloses, wherein: the first slot cycle index is smaller than the second slot cycle index; and the first interval is shorter than the second

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interval (column 3, lines 14-42 - column 4, lines 4-6, 15-25, 47-52, 66-67-column 5, lines 1-9).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R. Perez whose telephone number is (571) 272-7846. The examiner can normally be reached on 10:30 - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272- 4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


6/19/06

Julio R Perez
Examiner
Art Unit 2617


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER